

## Case study: Subsea Mattress Recovery for a CCS Infrastructure Campaign

### Challenge

Boskalis Subsea Services engaged Ashtead Technology to support them with the safe and efficient recovery of subsea mattresses for a major CCS transport and storage programme in the UKCS. The project focuses on repurposing existing oil and gas infrastructure to enable the transport and storage of captured CO<sub>2</sub> in depleted hydrocarbon fields.

The task required precise subsea handling of the mattresses, minimal reliance on ROV intervention and the ability to maintain operational efficiency in challenging seabed and low-visibility conditions to support Boskalis with preparation of the infrastructure for future CCS operations.

### Solution

Ashtead Technology deployed its Mattress Recovery Tool (MRT), supported by an experienced offshore operations team. The MRT is designed to recover subsea mattresses safely and efficiently from the seabed, back to the vessel deck, using the vessel crane. Our expert team implemented several design and procedural enhancements to optimise performance of the solution to meet project requirements.

A significant benefit of the MRT is the integrated thruster control software, which allowed the tool to self-orientate during recovery, removing the need for ROV assistance when landing it onto the mattress. The rotational capability of the MRT also allowed the vessel team to inspect the mattress using the onboard cameras with minimal ROV involvement before recovery.

In addition, the MRT's innovative offset sliding carriages provided greater flexibility when handling mattresses of varying sizes and orientations. On this project, the 8 carriages were successfully operated in different orientations recovering standard 3m wide mattresses, non-standard 2m wide mattresses and broken mattresses. Clear communication and coordination between Boskalis and Ashtead Technology offshore teams ensured accurate placement of the tool and efficient recovery throughout operations.



### Results and impact

The project successfully demonstrated the efficiency, versatility and reliability of Ashtead Technology's MRT in complex subsea recovery operations. Mattresses of both standard and non-standard sizes and broken mattresses were recovered safely and efficiently, with no tool downtime reported. The umbilical design and thruster functionality significantly reduced the need for ROV intervention, minimising operational risk and improving overall project efficiency.

The successful execution of this work supports ongoing carbon capture and storage development efforts and contributes to wider low-carbon energy objectives.